

Work Order ID 121385

121385

Thursday, June 26, 2014 2:58:21 PM

Page 1

Item ID: D3136-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Window Assembly
 Start Date: 6/26/14 Start Qty: 5.00 ***5*** Cust Item ID:
 Required Date: 6/26/14 Req'd Qty: 5.00 ***5*** Customer:
 Reference:

Approvals: Process Plan: MLS Date: 14-06-27 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3136	Rev E

100	FLOW WATER JET	0.00							DAS 23 9-89 14-09-9
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100
 Waterjet
 FLOW CNC Waterjet
 Plexiglass G-125

Memo
 1-Cut as per Dwg
 Dwg Rev: E
 Prog Rev: E
 2-Deburr if necessary

110	QC2- Inspect parts off machine FAI/FAIB	0.00							DAS 23 9-89 14-09-9
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110
 QC
 Quality Control

Memo

120	QC8- Inspect parts - second check	0.00							
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120
 QC
 Quality Control

Memo

14/08/10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 2

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 Start Date: 6/26/14 Start Qty: 5.00 ***5*** Cust Item ID:
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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	THERMOFORMING MACHINE					3	3		<i>Shp</i>
Thermoform	Memo	0.00							<i>4/10/7</i>
Thermoforming Machine	1-Thermoform as per Dwg D3136 and Work Instruction WI006								<i>PTB →</i>
	Dwg Rev. <u><i>E</i></u>								
	WI Rev. <u><i>C</i></u>								
	2- Engrave Part # and Batch # , and affix labels (D3108-9)								
150		0.00							
150	HAND FINISHING THERMOFORMING					x3			<i>OK</i>
HandThermo	Memo	0.00							<i>14/10/07</i>
Hand Finishing Thermoforming	Water sand and buff to remove scratches as required								

DQA:

Date:

15/05/15

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed

Date:

15/05/11

Work Order update only ☐

Work Order: <u>121305</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D 3436-041</u>		Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
NCR No. <u>15-4928</u>		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☒	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling	14/09/10	130	2	material Over heated leaving waves on edges.		Scrap 2 parts.	Wh 14/09/10.	DAS 38 9-89	DAS 9 9-89
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

material Over heated leaving waves on edges.

RE. OPERATOR ERROR/TRAINING WAS NOT CARRIED OUT CORRECTLY + NO RE-VERIFICATION ON WORK WAS PERFORMED TO ENSURE TRAINING WAS CORRECT

Q22012
15/01/26

PROVIDED FURTHER TRAINING TO NEW EMPLOYEE

REVIS on Job TRAINING log

Wh
15/01/08

14-11-19

15-01-23

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☒ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☒ Other
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TRAINING

Work Order ID 121385

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							DAS 38 9-89
Quality Control	Inspect edge and window deformation, wrap in plastic								JAN 14 2015
180	Identify as per dwg & Stock Location: S435	0.00							
180									
Packaging	Memo	0.00							3 JAN 14 2015 DAS 86 9-89
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							MCS 15-01-14
Quality Control									

[Handwritten signature]
15-1-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
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Material									
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Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Thursday, June 26, 2014 2:58:21 PM

Page 1

Work Order ID: 121385

121385

Parent Item: D3136-041

D3136-041

Parent Item Name: Window Assembly

Start Date: 6/26/14

Required Date: 6/26/14

Start Qty: 5.00

Required Qty: 5.00

Comments:

IPP B04.02.04ReformatKJ/DS
IPP C Thermoform in house 05/07/2007 DL
IPP D Rev E 07.09.28 EC verified by: DD
14/01/20 Repace "Folio" with Work Instruction. DL

IPP Rev E

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D3108-9		Manufactured	No			100	Each	435.0000	2	10			
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D3108-9

Decal

Location

Loc Qty

Loc Code

ST017

435

34554

9

46546

426

8

MACRLICS.125

Purchased

No

170

sf

175.7000

4.25

22.36842

MACRI ICS 125

1/8" Polycast II Sheet

DAS
23
9-89

1409-9

Location

Loc Qty

Loc Code

MAT019

3.7

124559

2.5

m125767

1.2

therm

172

123895

85

m129147

87

129147

14/10/08

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

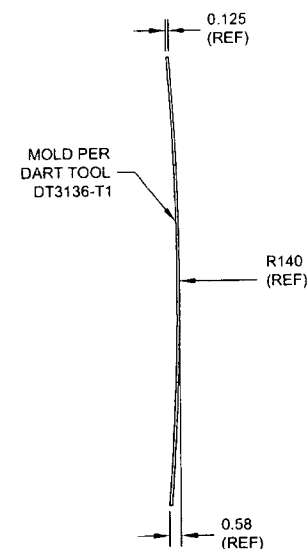
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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NO 121385 HW

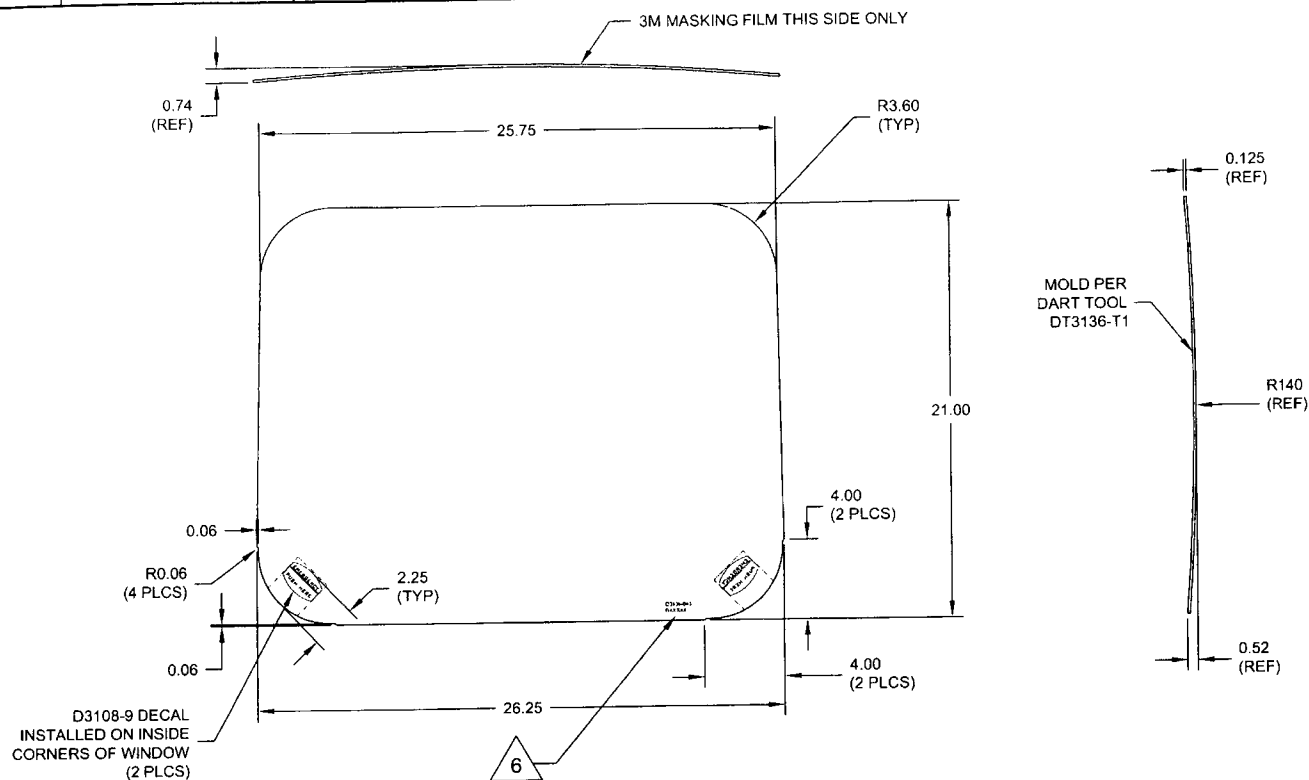
14-06-27

RELEASE
07.09.22

NOTES:

- 1) MATERIAL: POLYCAST II CLEAR ACRYLIC SHEET FER MIL-P-5425 OR PLEXIGLAS G
CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C, 0.125 THICK
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) REMOVE SHARP EDGES
- 6) IDENTIFICATION: ENGRAVE P/N "D3136-041" AND B/N ON LOWER EDGE
USE 0.125" HIGH LETTERS TO MAXIMUM DEPTH OF 0.005"
- 7) WEIGHT: 2.98 +/- 0.66 LBS
- 8) FORMING PROCESS: a) HEAT LARGER PIECE TO 250° F
b) DRAPE OVER D3136-T1 MOLD & CLAMP
c) LEAVE FOR 2 HOURS COVERED WITH INSULATED BLANKETS

E	REMOVE TRIM NOTE	DC	07.09.10
D	UPDATED MATERIAL NOTES	RF	05.12.01
C	ADDED FORMING & ENGRAVING SPEC	KJ	04.05.05
B	ADDED D3136-3 AND D3136-043	RF	04.01.21
A	NEW ISSUE	DS	02.04.18
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	DART AEROSPACE LTD	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV.
MFG. APPR.	<i>[Signature]</i>	D3136	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WINDOW ASSEMBLY	1
DATE		COPYRIGHT © 2002 BY DART AEROSPACE LTD	
07.09.10		THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT NOT TO BE USED ON ANY PURCHASE OR CONSUMABLE TO ANY OTHER PERSON OR THAT IT IS NOT TO BE REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	



D3136-3 WINDOW
D3136-043 WINDOW ASSEMBLY
 (INCLUDES D3108-9 DECALS)

NOTES:

- 1) MATERIAL: POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425 OR PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C, 0.125 THICK
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) REMOVE SHARP EDGES
- 6) IDENTIFICATION: ENGRAVE P/N "D3136-043" AND B/N ON LOWER EDGE
 USE 0.125" HIGH LETTERS TO MAXIMUM DEPTH OF 0.005"
- 7) WEIGHT: 2.61 +/- 0.58 LBS
- 8) FORMING PROCESS: a) HEAT LARGER PIECE TO 250° F
 b) DRAPE OVER D3136-T1 MOLD & CLAMP
 c) LEAVE FOR 2 HOURS COVERED WITH INSULATED BLANKETS

RELEASED
 07.09.22

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3136	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		WINDOW ASSEMBLY	1:6
DATE	07.09.10	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	